BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Digital Output Protection Technology	)	
and Recording Method Certifications:	)	MB Docket No. 04-62
	)	
Content Protection Recordable Media	)	
for Video Content	)	
	)	

OPPOSITION OF
PHILIPS ELECTRONICS NORTH AMERICA CORPORATION

Thomas B. Patton
Vice President, Government Relations
Philips Electronics North America Corporation
1300 Eye Street, N.W.
Suite 1070 East
Washington, D.C. 20005
(202) 962-8550

Rick Dorl
Vice President and General Counsel
Philips Consumer Electronics North America, a division of Philips Electronics North America Corporation
64 Perimeter Center, East
Atlanta, GA 30346
(770) 821-2232

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Philips Electronics North America Corporation ("Philips") respectfully submits this Opposition to the Digital Recording Method Certification filed by 4C Entity LLC ("4C") in the above-referenced docket.[1] In the event that the Commission decides to approve CPRM, it should condition such approval upon elimination of license terms that are unreasonable and discriminatory in violation of the *Broadcast Flag Report and Order*.[2]

I. INTRODUCTION AND EXECUTIVE SUMMARY

In its *Broadcast Flag Report and Order,* the Commission required that publicly offered digital broadcast content protection technologies be licensed on reasonable and

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[1] *In the Matter of Digital Output Protection Technology and Recording Method Certifications: Content Protection Recordable Media for Video Content* ("CPRM"), MB Docket No. 04-62 (March 1, 2004) ("*CPRM Certification*"); Certifications for Digital Ouput Protection Technologies and Recording Methods to be Used in Covered Demodulator Products: Commission Announces Certifications Received and Opens Window for Comments and Oppositions, *Public Notice*, DA 04-715 (*rel*. March 17, 2004).

[2] *In the Matter of Digital Broadcast Content Protection*, MB Docket No. 02-230, *Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 23550 (2003) ("*Broadcast Flag Report and Order"* and *"Broadcast Flag FNPRM,"* as appropriate).

nondiscriminatory terms.[3] To give effect that that command, the Commission compelled applicants for certification to submit licenses for Commission review, including "evidence that the technology will be licensed on a reasonable and nondiscriminatory basis."[4]

Philips believes that this requirement of reasonable and nondiscriminatory licensing is indispensable to the effective operation of the entire Broadcast Flag regulatory regime. The public interest good flowing from the Commission's decision to approve digital broadcast content protection technologies, instead of delegating those decisions to private parties with great financial stakes in the outcome, will be undermined if the Commission fails to give meaning to its reasonable and nondiscriminatory licensing mandate.

As Philips has urged throughout the Broadcast Flag proceeding, the terms and conditions upon which digital content protection and recording technologies are licensed, including the critically important compliance and robustness rules that perpetuate the Commission's rules downstream, will play a central role in determining how and whether competition and innovation will develop and flourish in the technology and equipment marketplaces. The regime adopted by the Commission to implement the Broadcast Flag is a unique hybrid, combining a government technology mandate, with the full force and effect of law, together with a reliance on private licenses that have the power to confer enormous market power on the licensors, who typically are competitors of other manufacturer licensees. In such a situation, the well-established Commission policy that licensing must be on a reasonable and nondiscriminatory basis is essential to prevent the manipulation of government power to enforce self-serving decisions of

[3] *See Broadcast Flag Report and Order* at ¶ 55.

[4] 47 C.F.R. § 73.9008(a)(4).

private parties having the potential to reconfigure the competitive landscape for their own advantage.

The facts involving CPRM make reasonable and nondiscriminatory licensing imperative. Competitive concerns are at their greatest where there are a limited number of technologies approved for a particular purpose, where network effects may make a single technology dominant, where technologies have been given other marketplace head-start advantages, or where a group of competitors jointly develop and market a technology. All of these aggravating factors apply to CPRM. CPRM is the only technology that may be used with several of the recording formats for which it is proposed. As DTLA (which includes 3 of the 4C member companies) has argued, the market is subject to significant network effects.[5] CPRM is the product of four major competitors, which together have market power. Further, CPRM has been given a significant head start advantage by approval from DTCP (which has a special, favored place as the sole IEEE 1394 protection technology approved under the DFAST and PHILA licenses) and its approval by the DVD-CCA for use in DVD players. This head-start advantage is particularly significant in the consumer electronics marketplace characterized throughout history by rapid movement towards standardized technologies that consumers can understand.

Rather than embracing the Commission's reasonable and nondiscriminatory licensing requirement, the 4C seeks to persuade the Commission that it should not concern itself with the details of the CPRM license, that the marketplace can sort it out.[6] The 4C's desire to avoid Commission scrutiny of the CPRM license terms is understandable because critical provisions are patently unreasonable and discriminatory.

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[5] *See* Comments of the Digital Transmission Licensing Administrator, LLC, MB Docket No. 02-230 (Feb. 13, 2004) ("*DTLA FNPRM Comments*") at 16.

[6] *See CPRM Certification* at 12, n.14.

There are certain hallmarks of a reasonable, nondiscriminatory licensing structure that the Commission should apply in evaluating licensing terms for technologies proposed for the Broadcast Flag:

1. No Use of "Non-Assert" Provisions. A regulatory regime intended to protect intellectual property should not have, as a condition for participation, a requirement that manufacturers forfeit their intellectual property.

2. Provisions That Promote Competition. Technologies should be offered on terms that promote competition; license terms that may inhibit or distort competition should not be approved. Thus:

- **a.** No Gatekeeper Control. A technology provider should not have the power to act as a gatekeeper to withhold downstream approval of other FCC-approved technologies.
- **b.** Limited, Inclusive Transparent Change Management. Changes in the technology and applicable compliance rules should be subject to a process that is open and fair to manufacturer licensees who often compete in product markets with the licensor.
- **c.** CE-IT Parity. License terms, particularly those that establish downstream compliance and robustness rules, should not discriminate between consumer electronics and computer-based devices and applications.

3. Public Policy Is Left To Public Policymakers. Decisions on public policy issues are properly made by the Commission, not by private licensors. Thus:

- **a.** Consistent, Ubiquitous Compliance Rules. Absent compelling circumstances, downstream compliance rules imposed by technology licenses should mirror those determined by the Commission to set an appropriate level of redistribution control; and
- **b.** Platform-by-Platform Approval of Technologies. The Commission should not grant an open-ended approval to any technology operating under the same name as the approved technology. Technologies should be approved for specific uses on specific platforms.

The CPRM License contains key provisions that are inconsistent with these principles and that would impede evolution of rival technologies and unnecessarily raise artificial barriers to entry. The Commission should not approve CPRM without conditioning such approval on the following changes:

1. The 4C should be required to remove any reciprocal non-assert from its agreement and replace it with a reciprocal obligation to license on reasonable and non-discriminatory terms. Further, the reciprocal obligation should not be subject to expansion, and should be clearly and correctly linked to disclosed patents or other legitimately protected intellectual property that the licensee is required to license for the use of CPRM to protect commercial audiovisual content. The right to terminate adopters for asserting patent rights against 4C licensees (including licensees other than those using the technologies for content protection) must also be removed. Alternatively, the 4C should be required to grant adopters the option of declining the reciprocal non-assert and accepting a mutual obligation to license necessary claims on RAND terms.

2. The CPRM compliance rules should provide that in the United States, Decrypted CPRM content bearing the EPN (redistribution controlled) state (i) may be output over any output technology that is permitted by the Commission under §73.9004(a), and (ii) may be recorded using any technology that is permitted by the Commission under § 73.9004(b). At minimum, any Authorized Digital Output Protection Technology and any Authorized Recording Method should be deemed approved by the 4C for use with EPN content.

3. Necessary changes in compliance rules applicable to EPN content should be subject to the process of amending Part 73. Any changes in an approved specification that are to be permitted should be subject to an open process that includes early, specific notice to licensees, licensee input, and Commission review and approval of the change, considering its impact on licensees and the public, as well as on content providers.

4. The CPRM Compliance Rules should not discriminate against CE products in favor of computer products. In particular, the right to use VGA and high-definition VGA outputs should not be limited to computer products, but should extend to consumer electronics products.

5. CPRM should be approved on a medium-by-medium basis. If the 4C believes that a different technology named CPRM is appropriate for a different transport, the 4C has the right, like any other technology proponent, to submit that technology for approval under the Commission's expeditious approval process.

II. THE COMMISSION'S REQUIREMENT OF REASONABLE AND NONDISCRIMINATORY LICENSING AS A CONDITION OF CERTIFICATION IS CONSISTENT WITH ITS DECADES-OLD PATENT POLICY, ITS ADOPTION OF THE DTV STANDARD, AND ITS OBLIGATION TO REGULATE IN THE PUBLIC INTEREST

The 4C argues in its technology certification that the FCC need not review its licensing terms because, in its view, the "marketplace" will ensure that unreasonable and anticompetitive terms will not prevail.[7] The 4C essentially is suggesting that it is inappropriate for the Commission to regulate, and remain involved with the newly regulated market to ensure the desired outcome of its regulations. The 4C's position is not only illusory, in that it conveniently ignores the Commission's *adoption* (as opposed to mere consideration) of the requirement that Broadcast Flag-certified technologies be licensed on reasonable and nondiscriminatory license terms, but is contrary to Commission precedent.

A. The Commission's Long-Standing Patent Policy, Particularly As Applied To The DTV Transition, Requires Reasonable And Nondiscriminatory Licensing

The Commission's policy of requiring licensing on reasonable and nondiscriminatory terms dates back to 1961 when it established its patent policies.[8] The Commission long has promulgated technical standards for common carriers, broadcasters, and other services that require use of patents in order to construct equipment that will comply with the Commission's

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[7] *Id.*

[8] *See* Revised Patent Policies of the Federal Communications Commission, *Public Notice*, 3 FCC 2d 26 (1961). In 1961, the Commission established a specific staff to study the assignment and licensing arrangements for patents related to the Commission's rules and to report to the Commission whenever it appeared that the management of any patent rights indicated a potential to obstruct service provided pursuant to standards adopted by the Commission. (In fact, monopoly in patents necessary for the design of communications equipment has been of concern to government regulators since the early days of radio, when the Marconi Company attempted to maintain control of its circuit designs for stations used aboard ships and on shore. The policy has been consistent of not adopting communications standards that would have the effect of sanctioning a monopoly or other competitive abuse through the patent process.)

rules. In conjunction with such regulation, the Commission has always required beneficiary patent applicants and holders to grant non-exclusive licenses to every responsible party on reasonable terms for the manufacture, use and sale of the communications equipment covered by the Commission's rules and regulations.[9]

One of the clearest and most recent expressions of the Commission's patent policies came in the Advanced Television proceeding that culminated in adopting a digital television standard, a series of orders in a proceeding directly related to this Broadcast Flag proceeding. There the Commission and its Advisory Committee stated that it expected proponents to "adopt a reasonable patent structure and royalty charging policy."[10] The testing procedures for Advanced Television systems required each proponent to agree in writing that "any relevant patents they own would be made available either free of charge or on reasonable, nondiscriminatory terms."[11] The Commission was clear in its mandate: "…we will condition the selection of any ATV system on the proponent's commitment to reasonable and nondiscriminatory licensing of relevant patents."[12] Finally, in 1996, when the Commission adopted the DTV Standard, it

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[9] In fact, at one time, the Commission required common carriers (such as AT&T, RCA, and Western Union) to file with it semi-annual patent reports. In addition, in 1961 when adopting rules to permit stereo FM, the Commission required statements from each proponent that the proponent would grant non-exclusive licenses to any responsible party at reasonable royalties. It found such representations to be "consistent with the patent policies of the Commission*." See Amendment of Part 3 of the Commission's Rules and Regulations to Permit FM Broadcast Stations to Transmit Stereophonic Programs on a Multiplex Basis*, Docket No. 13506, *Report and Order*, 21 RR 1605, at n.4 (1961).

[10] *See Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Docket No. 87-268, *Notice of Proposed Rulemaking*, 6 FCC Rcd 7024, at 7034, ¶ 46 and n.84 (1991).

[11] *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Docket No. 87-268, *Second Report and Order and Further Notice of Proposed Rulemaking*, 7 FCC Rcd 334 at 3358, ¶¶ 68-69 (1992).

[12] *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Docket No. 87-268, *Memorandum Opinion and Order/Third Report and Order/Third Further Notice of Proposed Rulemaking*, 7 FCC Rcd 6924 at 6981-82, ¶¶ 78-79 (1992); *accord*, *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Docket No. 87-268, Fifth

explicitly premised its adoption "on reasonable and nondiscriminatory licensing of relevant patents" and added that "if a future problem is brought to our attention, we will consider it and take appropriate action."[13] The Commission summarized its policies as follows:

> We have previously stated that in order for DTV implementation to be fully realized, the patents on a DTV standard would have to be licensed to other manufacturing companies on reasonable and nondiscriminatory terms. In response, the Advisory Committee's testing procedures have required proponents of any DTV system to follow American National Standards Institute patent policies which require assurance that: (1) a license will be made available without compensation to applicants desiring to utilize the license for the purpose of implementing the standard; or (2) a license will be made available to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination.[14]

B. The Commission Has Already Decided That Reasonable And Nondiscriminatory License Terms Are A Requirement For Certification

The Commission, in its *Broadcast Flag Report and Order*, has *required* that license terms for certified Broadcast Flag-compliant technologies be reasonable and nondiscriminatory.[15] This is a requirement under the Commission's existing rules, not a question of policy up for continued debate where an actual certification is submitted under those rules. The 4C's continued discussion, appropriate for a policy debate, is out of place in regards to its proffered certification for CPRM. Again, the Commission has adopted reasonable and nondiscriminatory licensing as a requirement, not merely proposed it for further consideration. The fact that the 4C continues to contest the Commission's role in the licensing area only underscores the fact that

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Further Notice of Proposed Rulemaking, 11 FCC Rcd 6235 at 6260-61, ¶ 67 (1996) ("*Fifth Further Notice*").

[13] *Advanced Television Systems and Their Impact on the Existing Television Broadcast System*, MM Docket No. 87-268, *Fourth Report and Order*, 11 FCC Rcd 17771 at 17794, ¶¶ 54-55 (1996).

[14] *Fifth Further Notice* at 6260-61, ¶ 67.

[15] *See Broadcast Flag Report and Order* at ¶ 53.

CPRM's license terms fail to meet the *requirements* of reasonable and nondiscriminatory licensing.

C. The Commission's Obligation To Regulate Broadcasting In The Public Interest Also Requires Licensing That Safeguards Against Anticompetitive Effects

The Commission has rested its authority to implement the Broadcast Flag on its *ancillary jurisdiction* to regulate broadcasting.[16] A necessary corollary to its exercise of that jurisdiction is the requirement that the Commission regulate to further broadcasting in a manner that serves the public interest.[17] Commission precedent includes numerous examples where the Commission issues a decision or regulation, and contrary to the assertions of the 4C, not only remains engaged with the newly regulated market, but implements pro-competitive conditions designed to ensure its regulatory goals are achieved in furtherance of the public interest.

For example, section 310(d) of the Communications Act requires the Commission to ensure that license transfers serve the "public interest, convenience, and necessity."[18] The Commission's review, "includes, *but is not limited to*, an analysis of the potential competitive effects of the transaction, as informed by traditional antitrust principles."[19] Thus, in the Commission's recent decision approving the DIRECTV/NewsCorp transaction, the Commission

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[16] *Id.* at ¶ 29.

[17] *Id.* at ¶ 30.

[18] 47 U.S.C. § 310(d).

[19] *In the Matter of Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner Inc., Transferee*, CS Docket No. 00-30, *Memorandum Opinion and Order*, 16 FCC Rcd 6547, 6555 at ¶ 21 (2001) (emphasis added).

specifically required procompetitive provisions to safeguard against potential, foreseeable anticompetitive effects resulting from its regulatory action.[20]

It would be seductively simple for the Commission to require all CE and IT products to recognize and give effect to the Broadcast Flag, and then turn its back on whatever occurs in the marketplace, as the 4C advocates. Fortunately, the Commission has chosen a different course. By requiring that approved digital content protection technologies be licensed on reasonable and nondiscriminatory terms, the Commission has undertaken to safeguard against the potential anticompetitive consequences of its Broadcast Flag regulatory regime, consistent with its obligation to regulate broadcasting in the public interest. The discharge of that obligation requires the Commission to reject CPRM, or, in the alternative, to condition its approval on the elimination from its license of unreasonable and discriminatory terms and substitute therefore provisions that will safeguard competition.

III. THE 4C'S EFFORTS TO AVOID SCRUTINY OF ITS LICENSE TERMS, WHILE UNDERSTANDABLE, ARE MISGUIDED.

While the market typically works in freely competitive environments lacking barriers to entry, combinations of competitors and government regulation, the "marketplace" of content protection technologies available for the protection of broadcast content meets none of these characteristics. Indeed, numerous characteristics of the marketplace facing manufacturers who wish to deploy devices to handle DTV content confirm the need for careful scrutiny of license terms and conditions.

- There is a government regulation effectively mandating use of approved technologies. This eliminates free and open competition. The technologies that

[20] *In the Matter of General Motors Corporation and Hughes Electronics Corporation, Transferors and The News Corporation Limited, Transferee, For Authority to Transfer Control*, MB Docket No. 03-124, *Memorandum Opinion and Order*, 19 FCC Rcd 473, at ¶¶ 358-370, App. F (2004).

are approved first will have enormous marketplace advantage, insulated from the normal operations of the market.[21]

- In the case of CPRM, this advantage is compounded by the prior approval of CPRM for use with DTCP, which in turn has been approved under the DFAST and PHILA licenses.

- Head start advantage is recognized, in markets with network effects, to be a significant barrier to entry by federal antitrust regulatory enforcement authorities.[22] In one speech, a prominent Department of Justice Antitrust Division official stated, **"**in industries in which network effects are significant, there is an increased likelihood that a single firm may come to dominate the market and persist in that dominance."[23] Another recognized that "it does not take much for one technology to become dominant [and the] technology that garners the early lead tends to become locked in as the winner."[24]

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[21] If others in the Broadcast Flag proceeding have their way, the barriers become even higher, with the requirement of content provider approval or approval by competing consortia of technology providers. The 4C's suggestion that a competitive marketplace can be achieved if the Commission simply allows "implementor choice" to lead the way, *CPRM Certification* at 12, n.14, ignores the reality of the rule adopted by the Commission. Any manufacturer that wants to provide a product that can receive or handle DTV content over a digital interface must adopt one or more of the approved technologies, and, particularly, must use the technologies that have become standard in the marketplace.

[22] *See, e.g.,* R. Hewitt Pate, Asst. Att'y Gen., Antitrust Div., U.S. Dept. of Justice, Telecommunications Competition, Address Before the Practicing Law Institute (Dec. 4, 2003), *available at* http://www.usdoj.gov/atr/public/speeches/201734.htm ("Network effects and first-mover advantages may…exacerbate the problems facing entrants."); Constance K. Robinson, Director of Operations and Merger Enforcement, Antitrust Div., U.S. Dept. of Justice, Network Effects in Telecommunications Mergers, Address Before the Practicing Law Institute (Aug. 23, 1999), *available at* http://www.usdoj.gov/atr/public/speeches/3889.htm ("The Characteristics of network industries make them prone to dominance by a single firm.") ("*Robinson Speech*"); A. Douglas Melamed, Deputy Asst. Att'y Gen., Antitrust Div., U.S. Dept. of Justice, Network Industries and Antitrust, Address Before the Federalist Society (April 10, 1999), *available at* http://www.usdoj.gov/atr/public/speeches/2428.htm ("network effects can increase the incentive for, and thus the likelihood of, anticompetitive conduct"); Carl Shapiro, Deputy Asst. Att'y Gen., Antitrust Div., U.S. Dept. of Justice, Antitrust in Network Industries, Before the American Law Institute and American Bar Association (Jan. 25, 1996), *available at* http://www.usdoj.gov/atr/public/speeches/shapir.mar.htm ("once achieved, the network effects that helped create dominance may make it more difficult for new entrants to dislodge the market leader than in other industries lacking network characteristics").

[23] Daniel L. Rubinfeld, Deputy Asst. Att'y Gen., Antitrust Div., U.S. Dept. of Justice, Competition, Innovation, and Antitrust Enforcement in Dynamic Network Industries, Address Before the Software Publishers Assoc. (March 24, 1998), *available at* http://www.usdoj.gov/atr/speeches/1611.htm ("*Rubinfeld Speech*").

[24] *See Robinson Speech*; a*ccord*, *United States v. Microsoft Corp.*, 253 F.3d 34, 49 (D.C. Cir. 2001) ("In markets characterized by network effects…[o]nce a product or standard achieves wide acceptance, it becomes more or less entrenched.").

- This is particularly true in the consumer electronics industry, which historically has been characterized by a recognition of the substantial consumer interest in standard formats and convergence on *de facto* or *de jure* standards.

- No competitor for CPRM has been proposed for the applications for which CPRM is contemplated. It is the only link based recording protection technology that permits recording on certain format media, most notably DVD-RW.

- Here the 4C seeks to lock in its head start advantage by dictating which approved technologies are permitted to handle content from CPRM.

The 4C argues that more than 100 companies have signed the license.[25] However, the fact that licensees have signed is more indicative of the market power conferred by CPRM's head start advantage, the pressure on those companies to move forward with DVD-Audio, a format that mandates the use of 4C technologies, and the lack of alternative encryption technologies for companies that wish to manufacture DVD-RW and DVD-RAM products, than the reasonableness of its license terms.[26]

The 4C also argues that it is willing to negotiate, but mischaracterizes its discussions with Philips.[27] In fact, the 2003 negotiations were making some progress, until the 4C walked away from the discussions in October. Contrary to the 4C's assertion, the breakdown did not result from any hardening of position by Philips. In fact, Philips submitted a constructive response on the issues to the 4C on September 29. Rather, the 4C walked out on discussions after Philips notified the 4C on October 20 that Philips believes that it has patent rights essential for implementing the 4C technology.[28] Philips provided this notice in response to *the 4C's*

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[25] *See CPRM Certification* at 11.

[26] *See* Reply Comments of AAI, MB Docket No. 02-230 (March 15, 2004) at 6.

[27] *See CPRM Certification* at 13, n.15.

[28] As a general matter, Philips prefers to not discuss its private negotiations. However, in this case, the 4C has decided to mischaracterize the discussions, leaving Philips no choice but to set the record straight. A copy of the Philips' October 20, 2003 letter to the 4C discussing its patent rights is attached as

suggestion that Philips evaluate its patent portfolio to determine whether Philips's concerns about the CPRM patent non-assert had any commercial significance. Philips thereafter requested a response to its September proposal in order to continue discussions on several occasions, and the 4C has repeatedly refused. Although the 4C now asserts it is willing to negotiate, its certification rejects the concerns raised by Philips.

The "public attacks" about which the 4C complain[29] were not attacks; they were communications with the Commission on important public policy issues necessitated by the pace of the Broadcast Flag proceeding. They raised the same concerns Philips had already raised with the 4C.

While IP licensing may be pro-competitive, it is well recognized that collective licensing by a pool of competitors can be fraught with antitrust dangers and can raise substantial competition concerns, both in the particular technology market and in related product markets.[30] Antitrust agencies and courts have long been concerned with ways such a pool can be misused to impede evolution of rival technologies, confer market power upon "insiders" (founders and licensors) to the disadvantage of "outsiders" (licensees) in ways that impede the latter's ability to

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Appendix A to this Opposition. Philips plans to make available its essential patent rights that read on CPRM on reasonable and nondiscriminatory terms.

[29] *CPRM Certification* at 13, n.15.

[30] *See, e.g., Antitrust Guidelines for the Licensing of Intellectual Property*, U.S. Dept. of Justice and Federal Trade Comm'n, at § 3 (April 6, 1995) ("*Antitrust Guidelines*"), *available at* http://www.usdoj.gov/atr/public/guidelines/ipguide.htm. DTLA asserts in its *FNPRM Reply Comments* that none of its license terms have been shown to be "*per se* unlawful." *See DTLA FNPRM Reply Comments* at 14. That, however, is a straw-man argument. Antitrust regulators generally apply "rule of reason" analysis to most aspects of patent pool activities, but that by no means suggests a lenient standard. As shown by the business review letters cited and discussed herein, the "rule of reason" analysis applied to patent pools is exhaustive and searching, and where license terms or behavior are found to inhibit competition, regulators require modifications to the arrangement. Even the *Antitrust Guidelines,* which are cited by DTLA in support of its "*per se*" claim, expressly recognize that "pooling arrangements can have anticompetitive effects." *See Antitrust Guidelines* at § 5.5.

compete and raise artificial barriers to entry, and otherwise suppress technology and product competition generally.[31] Further, restrictions contained in license agreements can be abused to distort competition in the technology market or in related product markets.[32]

Thus, among other things, antitrust regulators regularly review licensing pool agreements, and examine specific provisions for anticompetitive effect.[33] The general rule is that restrictive provisions in a license must be reasonably related and necessary to the alleged benefits of the license. If there is a less restrictive alternative, it must be used.[34] It is common practice for antitrust regulators to require substantial modifications in the licenses offered by technology pools.[35]

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[31] *See, e.g.,* Letter from Charles A. James, Asst. Att'y Gen., Antitrust Div., U.S. Dept. of Justice, to Ky P. Ewing, at 1 (Nov. 12, 2002) ("*3G Platform Business Review Letter*"), *available at* http://www.usdoj.gov/atr/public/busreview/200455.htm (the DOJ required "substantial modifying" of the pool proposal); *Id.* at 9 ("[W]here integration of patents [in collective licenses] occurs, issues of competitive harm can . . . arise with respect to intellectual property rights within the [licensed standard] or downstream products incorporating the patents or in innovation among the parties to the [standard]."); Letter from Joel I. Klein, Acting Asst. Att'y Gen., Antitrust Div., U.S. Dept. of Justice, to Garrard R. Beeney, at 5 (June 26, 1997) ("*MPEG-2 Business Review Letter*"), *available at* http://www.usdoj.gov/atr/public/busreview/1170.htm; Letter from Joel I. Klein, Asst. Att'y Gen., Antitrust Div., U.S. Dept. of Justice, to Garrard R. Beeney, at 5 (Dec. 16, 1998) ("*DVD-ROM Business Review Letter*"), *available at* http://www.usdoj.gov/atr/public/busreview/2121.htm.

[32] *See, e.g., MPEG-2 Business Review Letter* at 6 ("[W]e would be concerned if any specific terms of any of the contemplated agreements seemed likely to restrain competition. Such possible concerns might include the likelihood that the Licensors could use the Portfolio license as a vehicle to disadvantage competitors in downstream product markets; to collude on prices outside the scope of the Portfolio license . . .; or to impair technology or innovation competition.").

[33] One technology proponent (DTLA) suggests that antitrust concerns should be left for the courts. That suggestion ignores the central role of the Commission and of agencies generally in protecting competition. Private antitrust actions notoriously take years to resolve and are notoriously cumbersome and burdensome. The anticompetitive die will have been cast long before a court resolves a private antitrust claim. In this instance, the Commission is in a strong position and, indeed, is obligated to consider anticompetitive effects, as discussed in Section II.C, *supra*.

[34] *See, e.g., Antitrust Guidelines for Collaborations Among Competitors*, Federal Trade Commission and U.S. Department of Justice, April 2000 at §§ 3.2, 3.36(b) ("Reasonable Necessity and Less Restrictive Alternatives").

[35] *See, e.g.*, Letters cited in note 31, *supra.*

Here, the Commission has determined to safeguard competition by ensuring that the digital broadcast content protection technologies it approves are licensed on a reasonable and nondiscriminatory basis. A number of critical provisions in the CPRM license do not comply with that fundamental requirement. Their failure to do so pose precisely the concerns about anticompetitive effects discussed here.

IV. THE CPRM MANDATORY AND OPEN-ENDED LICENSEE NON-ASSERT PROVISION (§ 2.7) AND TERMINATION RIGHT FOR ASSERTION OF A PATENT CLAIM PROVISION (§ 6.1.4) CONFISCATE INTELLECTUAL PROPERTY AND ARE UNREASONABLE AND DISCRIMINATORY

The Commission should recognize the inherent anticompetitive tendency and discriminatory effect of a licensing agreement that requires a licensee to surrender its intellectual property rights against the licensor and against other users of a technology. As Philips has commented previously, it would be nothing less than perverse for the government, as a result of regulation seeking to protect the intellectual property of content providers, to require technology manufacturers to sacrifice their own intellectual property.[36] Moreover, in this context, such provisions discriminate against manufacturers that own relevant IP. Such manufacturers must pay more (by giving up IP rights) than manufacturers that do not own IP. This disparity among competing manufacturers in the cost of obtaining a license is the very definition of discrimination in licensing.

It is no coincidence that the entire CE industry, in the DFAST license, agreed upon a reciprocal obligation to license on reasonable and non-discriminatory terms rather than accepting

[36] *See* Comments of Philips, MB Docket No. 02-230 (February 13, 2004) at 24-25; Reply Comments of Philips, MB Docket No. 02-230 ("*Philips FNPRM Reply Comments")* (March 15, 2004) at 21.

a licensee non-assert.[37] Moreover, reciprocal obligations to license on reasonable and nondiscriminatory terms are the norm in those technology pools that have been reviewed by the Justice Department and deemed to pass muster under the antitrust laws, typically because the licensee is afforded the opportunity to earn a reasonable royalty on its own IP.[38]

Further, mandatory licensee non-asserts are inconsistent with the Commission's own recognition that competition and fairness are served by a regime of reasonable and nondiscriminatory licensing. Permitting a licensing regime for the Broadcast Flag government mandate predicated upon mandatory licensee non-asserts would contravene a core principle engrained in Commission practices for more than four decades.

The CPRM License contains just such a mandatory "non-assert" that requires licensees to forfeit any patent rights they may own that read on CPRM or a second 4C technology, CPPM, which is used for certain pre-recorded media, most notably DVD-Audio.[39] This forfeiture is a condition to the use of CPRM. This provision is unreasonable and discriminatory on its face. Further, it is depriving Philips of its own valuable intellectual property. This deprivation is not merely a theoretical concern – it has immediate, commercial significance because Philips believes its owns patent rights that are essential for implementing the 4C technologies.

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[37] DFAST License at ¶ *3.5* (*available at* http://www.cablelabs.com/udcp/downloads/dfast_tech_license.pdf.)

[38] *See, e.g.*, *3G Business Review Letter* at 5 (licensee is paid at the same rate and under the same term as Licensors for its grant-back of any essential patents to the pool); *MPEG-2 Business Review Letter* at 8 ("Nor does the Portfolio license's grantback clause appear anticompetitive [because] its scope, like that of the license itself, is limited to Essential Patents [and permits] a fair and reasonable royalty."); *Id.* at 5 (Portfolio license provides licensees with the opportunity to assert patent rights, and if independent expert determines that licensee has essential patents, licensee has option of charging a "fair and reasonable royalty" or "becom[ing] an MPEG-2 licensor and add[ing] its patent to the Portfolio.").

[39] *See CPRM Certification*, Ex. 1, "4C CPRM/CPPM License Agreement" ("*CPRM Agreement*") at § 2.7.

There is no *a priori* reason to include a reciprocal non-assert as opposed to a RAND licensing obligation. The Vidi technology proposed by Philips and HP contain a RAND provision and can serve as a model for the Commission.[40] The SmartRight technology proposed by Thomson also contains a RAND option in lieu of a mandatory non-assert.[41]

The CPRM non-assert is made more unreasonable by several aggravating factors:

- The IP covered by the non-assert can be expanded without licensee input, thus confiscating additional intellectual property even after a licensee has evaluated its IP portfolio and decided to become a licensee. The non-asserted IP is defined in terms of "Necessary Claims",[42] which in turn is defined in terms of the "Specification"[43] and the "4C Technology."[44] As set forth in section 3.3.1, the Specification is subject to change and expansion, both before and after version 1.0. As a result, the non-assert is open-ended, and the 4C can expand its scope without licensee input.

- The license agreement makes the surrender of IP permanent. Even if a licensee ceases to be a licensee, it is forever bound by the open-ended obligation to forfeit its IP.[45]

- The agreement includes a termination right of unlimited scope, allowing the 4C to terminate an adopter's license if the adopter asserts its patent rights against *any use* of the 4C technology, even uses wholly unrelated to the adopter's agreement or copy protection.[46]

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[40] *See In the Matter of Digital Output Protection Technology and Recording Method Certifications: Vidi Recordable DVD Protection System* ("Vidi"), MB Docket No. 04-60 (March 1, 2004) at App. B ("*Vidi Agreement*") at § 2.5.

[41] *See In the Matter of Digital Output Protection Technology and Recording Method Certifications: SmartRight,* MB Docket No. 04-60 (March 1, 2004) at App. A (*"SmartRight Agreement"*) at § 5.5.

[42] *CPRM Agreement* at § 1.41.

[43] *Id.* at § 1.47.

[44] *Id.* at § 2.4 (further defining Necessary Claims in terms of the "Scope of Use.")

[45] *Id.* at § 6.3. *Compare DVD-ROM Business Review Letter* at 9 (approving grant-back clause because, among other things, it had a limited "term" and no automatic renewal clause.); *3G Business Review Letter* at 6 (licensee's grant-back obligation expires at the end of the year in which its Platform (pool) license expired). Note that in both of the foregoing cases, the grant-back provided for reasonable compensation under comparable terms.

[46] *See CPRM Agreement* at § 6.1.4.

- Despite repeated requests, the 4C member companies have never identified the patents they each own. Thus, there may be companies standing in the role of CPRM licensor that do not own any patents. Nevertheless, they require licensees that own patents to surrender their rights.[47]

The 4C argue that they should be entitled to include a non-assert because CPRM is "market-enabling" and creates a "level playing field" for the benefit of all within the "system."[48] With all due respect, it is not up to the 4C to confiscate the IP rights of others, however valuable it might wish to make its own CPRM technology. What the 4C may consider to be "fair" to adopters that *do not* own IP, certainly is not fair to innovating adopters that *do* own valuable IP. Moreover, it is not up to the 4C to decide that competition should only be "based on innovation with respect to product functions and features,"[49] rather than innovation in content protection technology. The 4C's non-assert reduces the incentive to develop innovative new technologies and, thus, suppresses competition for innovation and technology. A level and fair playing field that does not suppress technology competition can be better achieved by requiring adopters to agree to grant their IP rights on RAND terms and conditions.

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[47] *Compare MPEG-2 Business Review Letter* at 7-8 ("[One reason that the pool does not appear to be illegal is that the] list of Portfolio patents attached to the . . . license will provide licensees with information they need to assess the merits of the . . . license."). In fact, ownership of essential patents has been considered a requirement for antitrust regulators reviewing concerted licensing by competitors. *See, e.g., MPEG-2 Business Review Letter* at 2-4 (patent pool withstands antitrust review because licensors sponsored independent, third-party search for technically-essential patents; "each of the Licensors owns at least one patent . . . identified as essential to compliance . . . with the standard;" and the expiration or invalidity of a Licensor's last patent in the pool "terminates the Licensor's participation" in the pool); *see also 3G Business Review Letter* at 6. The reason is simple—absent essential blocking patent positions, there often is no justification for allowing a consortium of potential competitors that together possess market power to collaborate rather than requiring them to compete. *See Antitrust Guidelines* at § 5.5; *see id.,* Example 10 (joint licensing venture by two competitors more likely to pass antitrust review where only blocking patents are involved).

[48] *CPRM Certification* at 15. It should also be noted that the termination right retained by the 4C in section 6.1.4 has nothing to do with creation of a level playing field for participants in the content protection "system." It extends to any use the 4C wishes to license for its technologies.

[49] *Id.*

4C also argues that the non-assert is appropriate in light of its members' alleged agreement to license its IP at prices they declare to be "less-than-market-rates" set "to recover, over a reasonable period of time, their costs."[50] However, the 4C has not offered to subject the relationship of its costs and pricing to public scrutiny, or even to reduce "unit" charges if it starts making a profit. If formats that use CPRM are successful, the annual market for 4C-enabled and licensed blank media can reach into the billions of dollars, with annual revenue to 4C in the hundreds of millions of dollars. This is far more revenue that would be required "to recover costs." Indeed, Philips and HP are offering a comparable system, Vidi, as a commercial, margin-contributing activity, for prices substantially below CPRM.[51]

Moreover, as Philips has consistently maintained, the 4C member companies gain far more than dollars from their control of CPRM, including control over changes to the applicable technology and rules, and inside knowledge to fuel their product plans in the product markets—the very markets in which the 4C argue that adopters compete. The 4C is tenaciously attempting to hang on to these prerogatives in this proceeding.

The 4C argues that the use of non-asserts is common in content protection licensing.[52] Presumably, the 4C is relying on the same license agreements cited by DTLA in its certification.[53] None of the licensing agreements for those technologies were developed within the context of a government mandate, as is the case here. Moreover, CSS (Toshiba, MEI),

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[50] *Id.* at 13, 15 and 17.

[51] *Compare CPRM Agreement* at Ex. B, with *Vidi Agreement* at Article 3.

[52] *See CPRM Certification* at 14.

[53] *See In the Matter of Digital Output Protection Technology and Recording Method Certifications: Digital Transmission Content Protection* ("DTCP"), MB Docket No. 04-64 (March 1, 2004) ("*DTCP Certification*") at 17.

DTCP (Toshiba, MEI, Intel), and HDCP (Intel) all originated from, and use licenses drafted by, the same group of companies that combine to offer CPRM.[54]

Further, the CSS license was accepted based on the premise that the copy protection standard would be controlled not by the original licensors, but by a broadly representative, multi-industry body, the Copy Protection Advisory Council of DVD-CCA. Changes to the CSS compliance rules require a defined, broad consensus of content providers, consumer electronics companies and IT companies.

The 4C argues that 100 companies have relied on the non-assert provision, and that it would be unfair to compel them to accept a different licensing structure.[55] This reliance argument is suspect, as there is no evidence that many adopters signed the agreement contemplating the expansion of CPRM use to a mandatory FCC regime. The 4C concedes that its licensing of CPRM began before the Broadcast Flag proceeding or even the BPDG.

In any event, there is no need to "compel" those adopters that wish to participate in a program of mandatory reciprocal non-asserts among other like-minded adopters "to accept a different licensing structure." The 4C's goals can be accomplished by giving adopters the option of participating in a mutual non-assert regime, or the less confiscatory option of granting and accepting a reciprocal duty to license IP on reasonable and non-discriminatory terms.

Necessary Change. If the Commission is to approve CPRM, such approval must be conditioned on the 4C removing any reciprocal non-assert from its agreement and replacing it with a reciprocal obligation to license on reasonable and non-discriminatory terms. Alternatively

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[54] Two of the three CPS for BD-RE companies (Sony and MEI) also are 5C companies. If the Commission agrees that Broadcast Flag-and DFAST-approved technologies should not contain non-asserts, Philips will support a change in the applicable licensing requirements for CPS for BD-RE.

[55] *See CPRM Certification* at 16.

the 4C should be required to grant adopters the option of declining the reciprocal non-assert and accepting a mutual obligation to license necessary claims on RAND terms. In addition, the reciprocal obligation should not be subject to change in scope, should be clearly and correctly linked to disclosed patents or other legitimately protected intellectual property that the licensee is required to license and should not apply to any activity other than the use of CPRM to protect commercial audiovisual content. The right to terminate adopters for asserting patent rights against 4C licensees (including licensees other than those using the technologies for content protection) must also be removed.

Further, as a condition for maintaining any reciprocal obligation, the 4C member companies should be required to identify essential patents that they are licensing. While the companies should not be required to provide an exhaustive list, they should be required to provide a good faith list to inform licensees and potential licensees of the scope of their rights and to support the reasonableness of imposing a reciprocal licensing obligation.

V. THE 4C'S ASSERTION OF THE POWER TO CONTROL DOWNSTREAM APPROVAL OF TECHNOLOGIES IS ANTICOMPETITIVE AND UNREASONABLE

Giving one competitor the right to veto the downstream use of a competing technology raises obvious competitive risks that should not be countenanced in the Broadcast Flag regulation. These risks are heightened when a consortium of competitors with market power wields the veto. Absent compelling circumstances, any technology deemed by the Commission to provide appropriate protection to broadcast DTV content should be deemed acceptable by any other approved technology for downstream use.

The proposed CPRM license agreement asserts the extraordinary right to approve or disapprove technologies that compete with CPRM or with other technologies that may be

sponsored by the 4C member companies. The CPRM Compliance Rules specifically limit the digital outputs a CPRM licensed playback device may use for flagged DTV broadcast content it plays to those specifically approved by the 4C.[56] The only technologies now approved (except for certain computer products) are DTCP (licensed by three of the four 4C companies) and HDCP (licensed by one of the 4C companies).

The proposed CPRM license agreement likewise limits the recording protection technologies that a CPRM playback device can use for further copies.[57] Not surprisingly, the only technologies thus far identified by CPRM are CPRM itself, and the special purpose D-VHS (owned by an affiliate of one of the 4C companies).

These approval rights provide the 4C with the power effectively to kill competition by prohibiting the playback devices that decrypt CPRM from using a competing technology to make further recordings. This is particularly troubling when it is recognized that CPRM is needed for DVD-RW recorders. While it may be possible to develop a variant of CPRM for +RW recorders, a different technology, Vidi, provides substantial advantages, including the possibility of using legacy-compatible blank discs. Many manufacturers are manufacturing dual format -RW/+RW recorders, including devices with dual slots or internal hard disk drives. The CPRM rule would prohibit these recorders from using Vidi, and will inhibit the proliferation of +RW products.

The approval rights also give the 4C the power to inhibit competition in output protection technologies by favoring technologies promoted by 4C members. A CPRM-compliant device must use DTCP or HDCP outputs. As the American Antitrust Institute ("AAI") said with respect

[56] *See CPRM Agreement* at Ex. C-3a, § 4.1.1.

[57] *See CPRM Agreement* at Ex. C-3a, § 4.2.

to an analogous provision in the DTCP license, "[t]his would. . . make something of a mockery of the proposal that an initial technology could be approved while at the same time leaving the door open for the later introduction of competing approaches."[58]

Further, the 4C concedes that it gives its Content Participants the power to veto proposed alternative technologies (subject to a burdensome and time consuming arbitration process).[59] In its Broadcast Flag Order, the Commission properly safeguarded against "with one industry segment exercising a significant degree of control over decisions regarding the approval and use of content protection and recording technologies in DTV-related equipment."[60] Permitting that control one step downstream would defeat one of the central tenets of the Broadcast Flag Order.

Competition can be harmed not only by rejection but also by delayed approval. If the FCC does not require automatic approval, any new technology will need to seek out and obtain separate approval not only from the FCC, but also from *every other provider of a technology* that may protect content provided to a device that will use the technology. Thus, for example, a technology designed to protect recordings would need approval from FCC, CableLabs, DTLA, the 4C, and any other administrators of approved technologies. Such approvals will be burdensome and will likely take long periods of time in circumstances where delay can kill or cripple the adoption of a new technology. Further, in many cases, these approvals would require the blessing of direct competitors or of each member of consortia containing companies with interests in direct competitors. At minimum, such a process would create delay and uncertainty

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[58] Reply Comments of the AAI, MB Docket No. 02-230 (February 19, 2003) ("*AAI Reply Comments")* at 10-11.

[59] *See CPRM Certification* at 17.

[60] *Broadcast Flag Report and Order* at ¶ 52.

that will stifle innovation. At its worst, the process would create intolerable entry barriers, destroying the very competitive marketplace the Commission seeks to foster.

The threat of exclusionary conduct in similar contexts has been recognized by antitrust experts. Industries characterized by "network effects" present additional antitrust challenges. As the [then] Deputy Assistant Attorney General for Antitrust has said, "In industries in which network effects are significant, there is an *increased likelihood* that a single firm may come to dominate the market and persist in that dominance. . . . Such a firm may, in fact, have *an incentive to adopt competitive strategies* that support a single standard by *preventing the products of rivals from achieving compatibility*."[61]

There rarely is a valid reason for an approved technology to not allow the use of any other approved technology in its sink or playback devices. If a technology provides adequate security when it is used by a directly covered Demodulator Product, it will provide adequate security for use by a downstream product. As at least three of the four 4C companies have recognized, "it is axiomatic that any chain is only as strong as its weakest link."[62]

Nor, is there any question of incompatibility. Once a playback device decrypts redistribution-controlled content, it will know that the content is so protected, and should be able to route the content to any output or recording that is protected by a technology that the Commission has determined is suitable for redistribution controlled content.[63] This is the

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[61] *Rubinfeld Speech* at 4-5 (emphasis added). *See* note 22, *supra.*

[62] *DTCP Certification* at 22.

[63] There may be compelling, unusual circumstances where a technology provider can demonstrate that this is not the case. For example, HDCP, which was engineered to be a simple system without any copy control information for non-recordable transport to displays, may be limited in its ability to hand off content to multi-function link protection systems. However, such circumstances are not present with CPRM.

approach reflected in the Vidi technology compliance rules submitted by Philips and HP.[64] It is also reflected in the SmartRight compliance rules.[65]

Competition among technologies and products should be decided on the merits of the technologies and products. It should not be decided through the need to obtain approval by dominant consortia, which may be guided by competitive interests other than the efficacy of a technology or the needs of a coherent content protection system.

Necessary Change. If the Commission is to approve CPRM, such approval must be conditioned on requiring the 4C to provide in its compliance rules that in the United States, Decrypted CPRM content bearing the EPN (redistribution controlled) state (i) may be output over any output technology that is permitted by the Commission under §73.9004(a), and (ii) may be recorded using any technology that is permitted by the Commission under § 73.9004(b). At minimum, any Authorized Digital Output Protection Technology and any Authorized Recording Method should be deemed approved by 4C for use with EPN content.

VI. THE 4C'S ASSERTION OF THE RIGHT TO CHANGE COMPLIANCE RULES AND TECHNOLOGY WITHOUT LICENSEE INPUT IS UNREASONABLE AND DISCRIMINATORY

Antitrust concerns are compounded by the founders' ability to change the compliance rules over time in ways that can competitively disadvantage licensees that are founders' direct product rivals. Competitive mischief can occur not only through changes that favor the founders' own products and unduly burden competitors' products but also by the time-to-market advantage that comes from a potentially major lag between when founders know and when their competitors know about the changes to be imposed.

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[64] *See Vidi Agreement* at Ex. A (Compliance and Robustness Rules) at § A.1.2.2.1

[65] *See SmartRight Agreement* at Ex. B (Compliance Rules) at §§ 2.2(a)(iii), 2.2(b)(ii).

The proposed CPRM Agreement would grant to the 4C the right to make changes in the Compliance Rules applicable to broadcast DTV content played back from a CPRM protected copy regardless of whether the FCC has concluded, by amendment to Part 73, that such a change is necessary to protect DTV content or is in the public interest.[66] The 4C also reserves the right to make changes to the Specification for CPRM.[67]

The changes permitted by the CPRM Agreement do not require the 4C to seek approval or accommodate the interests of licensees, who invest millions of dollars in product design, development and manufacturing on the basis of the approval of a technology. By contrast, Content Participants are given the right to object and to arbitrate over proposed changes.[68] This one-sided change management process is unreasonable and discriminates against implementer licensees.

While 4C asserts that "material" changes will not be permitted in a Specification after it is released at version 1.0 and that this "will occur as soon as possible," most of the Specification sections have been in use for a number of years and have not yet been released in version 1.0. 4C still offers no clue as to when "as soon as possible" might occur. Further, the examples given for material changes[69] leave open the possibility that truly material changes may still be deemed immaterial (e.g., changes that do not "require" new technical features").

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[66] *See CPRM Agreement* at § 3.3.2.

[67] *Id.* at § 3.3.1.

[68] *See CPRM Certification* at 17.

[69] *See CPRM Agreement* at § 3.3.1.

There is no limitation on material changes with respect to Compliance Rules. Further, the 4C has notified adopters that many future changes are contemplated. In fact, the rules start with a bold notification that the rules "are subject to further modification."[70]

As discussed in detail in prior Philips filings in the Broadcast Flag proceeding,[71] the ability of a licensor to impose changes unilaterally without notice or opportunity for licensee input has the potential to confer upon licensors enormous competitive advantage. Privately negotiated changes may be mandatory and more restrictive than provided under current versions of the licenses or "voluntary" and less restrictive. Either type of change may be targeted to enhance licensors' business models or interfere with new products being developed by licensee competitors.

Absent open and fair change management procedures, there would be nothing to assure that copy limitations, restrictions on digital and analog outputs, limitations on PVR processing, and other rules won't be imposed by fiat. The concerted decisions of the "in" group without input from or advance notice to competing outsiders enable the licensors to use their control over these rules to disadvantage competitors or disrupt their plans in the market for consumer electronics products themselves. As noted by a leading official of the Justice Department, "it is important that competition in markets for complementary products be based on the merits and

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[70] *See e.g., CPRM Agreement* at Ex. C-3a, §§ 3.4 (announcing possible adoption of video watermark reading obligation, which has nothing to do with the protection of audiovisual content), 3.5 (announcing possible adoption of video watermark reading obligation), 4.1.2 (announcing possible changes in rules relating to approved digital audio outputs), and 4.1.4.6 (announcing possible change in obligation to use certain labeling technologies if the 4C concludes that they are not available on reasonable and nondiscriminatory terms).

[71] *See, Philips FNPRM Reply Comments* at 28-29; October 22, 2003 Letter of Thomas B. Patton to The Honorable Michael K. Powell in MB Docket No. 02-230 ("*Philips October 22, 2003 letter*") at 6-8.

not be diminished by the strategic behavior of a firm with a dominant position in a market."[72] These concerns are magnified when the dominant position belongs not to a single competitor, but to a jointly-acting consortium of competitors.[73]

Licensors will have advance, inside information, affording them substantial lead-time to market and other competitive advantages in their investments, business strategies, and product design. The AAI cited potential first mover advantage in commenting in the main Broadcast Flag proceeding that the ability of the licensor to amend the license terms "raises anticompetitive concerns."[74]

Examples already exist that demonstrate the symbiotic relationship between copy protection systems and product design. Thus, for example, it was discovered that CPRM could not be implemented on DVD+RW recording devices without the adoption of a new, incompatible, disc design. Also, for example, despite the fact that every CE company is working eagerly to be the first and best to develop wireless networking applications using Internet Protocol-based transports, DTCP over IP involved (and continues to involve) fundamental changes to DTCP that could have been known only to insider DTLA companies.

One-sided changes can also significantly threaten consumer use of digital broadcast content in a manner that falls outside the scope of the Broadcast Flag regulation. Only by providing implementers with the ability to participate in any changes to an approved technology can the Commission be sure that "change management" does not become synonymous with

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[72] *Rubinfeld Speech* at 24.

[73] *See* DVD-ROM Business Review Letter at 5-8 (describing competitive harm in using patent pool to obtain advantage in market for "downstream products" or "complements" to the standard, such as packaging methods for DVD-ROMs, a useful complement to the licensed manufacturing technology); 3G Business Review Letter at 9, 12.

[74] *AAI Reply Comments* at 12-13.

"rewrite" of the Broadcast Flag regulation, or enable serious, anticompetitive exacerbation of first-mover advantages to licensors in the marketplace.[75]

One example of a change mandated, and then withdrawn by the 4C highlights the concerns raised by an unreviewable change provision. In July, 2003, the 4C unilaterally adopted a rule requiring all consumer electronics CPRM licensed recorders to search analog inputs and respond to CGMS-A, an unregulated and easily manipulated signaling technology, and to Macrovision AGC, a proprietary technology licensed by Macrovision. The obligation distorted competition between CE and IT devices, as computer-based recorders were not subjected to the same obligation. It also distorted competition among technologies, favoring a relatively weak signaling method. The new obligation was adopted in the midst of multi-industry discussions and public policy debate surrounding the best approach to dealing with the analog hole, apparently to satisfy the competitive needs of the 4C companies in a foreign market—Japan.

The new obligation violated a central requirement of joint IP licensing—it imposed a restraint on conduct that extended far beyond the scope of the IP being licensed. Video recorders recording content from analog inputs do not use CPRM or any 4C licensed technology. In essence, the 4C were bootstrapping an obligation to use their technology where it would not otherwise be required. Further, absent government controlled encoding rules, CGMS-A could be used to restrict normal consumer conduct (*e.g.*, broadcast TV could be marked to prevent

[75] The Motion Picture Association of America ("MPAA") recognizes the importance of changes, asking that a technology be decertified if a change is made that is not approved by either the Commission or content providers. *See* Comments of the MPAA, MB Docket No. 02-230 (February 13, 2004) at App. A, 8. The same rationale applies to changes that adversely affect implementers.

recording). Philips notified the Commission of this action in an ex parte filing on September 23, 2003.[76]

The 4C has now apparently recognized that this obligation would not withstand critical scrutiny. On the eve of its Broadcast Flag certification filing on March 1, 2004 (almost 9 months after it imposed the rule), the 4C announced that it was withdrawing this requirement in jurisdictions other than those in which CPRM was approved pursuant to a government mandate or "its equivalent," and in which such approval was "based, in part" on the requirement to read and respond to CGMS-A and Macrovision AGC. This language is opaque, and it is not clear what jurisdictions the 4C means. However, the language requirement appears to confirm that the CGMS-A/Macrovision obligation was based on the specific market needs of Japan.[77] While Philips applauds the 4C's decision to retreat from its over-reaching CGMS-A/Macrovision mandate, manufacturers that designed products based on the CGMS-A/Macrovision mandate now are faced with the choice of continuing to comply with the burden, or undertaking the expense and delay of changing their product plans in mid-cycle. These decisions were certainly known in advance by the 4C members that made them. Further, the obligation remains a barrier to entry in other jurisdictions. In light of the desire of manufacturers to design products for multiple markets, the 4C's ancillary restraint continues to adversely affect the U.S. market. A change management process that includes full licensee participation and Commission review is essential to ensure that the 4C does not reinstate this obligation once the Commission approves CPRM.

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[76] *See* September 23, 2003 Letter from Lawrence R. Sidman, on behalf of Philips, to Marlene Dortch in MB Docket No. 02-230, at 4 and App. C.

[77] The Commission should ask the 4C what jurisdictions are covered by this requirement and confirm that it will not apply in the U.S., either under the Broadcast Flag or under DFAST, if CPRM is approved under the DFAST license.

In sum, the Commission is considering the approval of CPRM as it has been presented, with the rules that are presented. That is the technology, and those are the rules that are subject to scrutiny and about which all parties are commenting. The Commission should not grant an open-ended approval right that enables the 4C to make fundamental changes in the public policy represented by approved compliance rules. Further, the Commission should not make licensees buy the proverbial pig in a poke, and make investments in reliance on an approved technology that is subject to change.

Necessary Changes. The CPRM Compliance Rules for EPN content currently reflect those adopted by the Commission for Covered Demodulator Products. Necessary changes to the Compliance Rules applicable to such content should be subject to the process of amending Part 73. Any changes that are to be permitted (including specification changes) should be subject to an open process that includes early, specific notice to licensees, licensee input, and Commission review and approval of the change, considering its impact on licensees and the public, as well as on content providers.

VII. THE CPRM COMPLIANCE RULES DISCRIMINATE UNREASONABLY AGAINST CONSUMER ELECTRONICS DEVICES

As Philips has noted previously, CE and IT products are increasingly in direct competition with each other. Differential licensing terms have the potential to skew consumer decisions in favor of one class of devices over another. This is particularly dangerous as industry and consumers adjust to the growing convergence between sectors. Just as the Commission should judge CE and IT devices for compliance with the Broadcast Flag regulation under one set of objective criteria, licensing terms should be required to do the same to the greatest extent possible.

CE products have not been used for the indiscriminate redistribution of music and analog broadcast content over the Internet, and there is no justification for placing more stringent digital content protection restraints on them compared to IT products. In fact, just the opposite is true, although Philips does not seek such an approach.

The CPRM compliance rules discriminate in an important respect between consumer electronics and computer products in favor of IT devices. Computer Products may use VGA, SVGA, and XGA outputs. Consumer electronics products are prohibited from using such outputs for Copy No More content, despite the fact that CE devices may be used to feed high quality monitors that use such inputs.[78]

Although this discriminatory provision does not apply to EPN content, the provision is contained in the only CPRM agreement that is made available for handling EPN content. Further, the discriminatory effect does apply to another regulatory regime administered by the Commission—the DFAST license.

This discrimination provides little or no added content protection for, as discussed above, a chain is only as strong as its weakest link. Further, any added protection that is provided is outweighed by the adverse effects of favoring one class of product over another. The Commission should not countenance this discrimination.

Necessary Change. If the Commission approves CPRM, it should do so only on the condition that the 4C amends the CPRM Compliance Rules at Section 4.1.3 by striking the words "operating as software on, or as an internal or peripheral component of, a Computer Product."

[78] *See CPRM Agreement* at Ex. C-3a, § 4.1.3.

VIII. CPRM SHOULD BE APPROVED FOR SPECIFIC MEDIA WHERE THE TECHNOLOGY IS DEFINED

CPRM seeks a carte-blanche approval for any technology it may decide to call CPRM. Such an approval would deprive the Commission of any ability to review the technology or licensing terms that may apply to the new transport. This request should be denied.

The Commission has correctly decided that it should evaluate technology proposals for compliance with its standards. There is little point to such an evaluation if, once approved, a technology proponent is free to declare a different technology, subject to different rules, to be within the scope of approval. It is not uncommon for different transports and platforms to require different technologies. In fact, the 4C asserts that CPRM "is designed specifically for" various removable media types,[79] notes the need for certain media specific changes,[80] and states that technical work was needed to map CPRM to +RW media.[81]

Necessary Change. If the Commission approves CPRM, it should do so only on a medium-by-medium basis. If the 4C believes that a different technology named CPRM is appropriate for a different transport, the 4C has the right, like any other technology proponent, to submit that technology for approval under the Commission's expedited approval process.

IX. THE CPRM COMPLIANCE RULES IMPOSE OVER-REACHING OBLIGATIONS THAT ARE ANCILLARY TO THE USE OF CPRM

The CPRM Compliance Rules include numerous instances where they obligate licensed products to take actions with respect to content that is not protected by CPRM and, which apart from the obligation imposed by the 4C, would not implicate the use of 4C technology at all.

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[79] *See CPRM Certification* at 3.

[80] *Id.* at 5, n.5.

[81] *Id.* at 4, n.4.

These provisions purport to obligate devices to use 4C technology when they would not otherwise be required to do so. Such ancillary obligations cannot withstand scrutiny in an individual technology license, much less in a collective pool license.

Part VI discusses one such restraint, the obligation to inspect content received in the clear over analog interfaces for CGMS and Macrovision AGC and to respond to those systems. A number of similar provisions are contained in the Compliance Rules set forth in Exhibit C-2. While these rules are entitled "Compliance Rules for Recording and Playback of Audio Content," nothing in the rules themselves limits their effect to audio or to audio devices. Thus, for example, 4C purports to obligate a "Participating Recording Device" that receives "content" over an "Authorized Access Control Method" to encrypt and record that content "using CPRM."[82] This provision purports to outlaw competing encryption methods, even those authorized by the "Authorized Access Control Method."[83]

Another particularly troubling provision obligates licensed products that receive "content" in the clear to include a Verance-4C Watermark detector.[84] Similarly, products licensed to play CPRM Protected "Commercial Entertainment Content" (a term which includes both audio and video) and capable of playing back unencrypted content, must include a Verance-4C Watermark detector.[85] The use of a Verance-4C Watermark detector is not at all necessary for the playback or recording of unencrypted content. However, by including this requirement in the CPRM license agreement, the 4C, obligates manufactures who only wish to playback CPRM-

[82] *See CPRM Agreement* at Ex. C-2, § 3.1.1.

[83] These rules also violate the principle of CE/IT Parity, as they purport to control entire CE devices, but only attempt to control the specific CPRM-licensed software application on a computer. *See Id.*, § 1.18 (defining "Participating Device.")

[84] *See, CPRM Agreement* at Ex. C-2, § 3.1.2.

[85] *Id.* at § 4.1.

encrypted audiovisual content (including marked broadest flag content) or to make CPRM recordings of such content to purchase *an additional license from 4C*. This is a classic case of tying one technology license to another, which enables a licensor to exploit his market power to extract additional revenues, and extend his dominance from one market segment (technology for recording and playback of protected video) to another (technology for playback and recording of unprotected audio and video content).

Necessary Changes. If the Commission is to approve CPRM, such approval must be conditioned on the 4C's clarification that the Compliance Rules in Exhibit C-2 apply only when playing back CPRM-encrypted audio content, that content received over an Authorized Access Control Method may be protected by any means approved by that Authorized Access Control Method (including marked broadcast flag content), and that licensees are not required to also purchase a Verance-4C license if they use CPRM only for playback and recording of audiovisual content.

X. CONCLUSION

The Commission, in its Broadcast Flag rules, wisely and consistent with decades of precedent, has required digital broadcast content protection technologies to be licensed on reasonable and nondiscriminatory terms. The CPRM license fails that fundamental test of fairness. Through its mandatory licensee non-assert provisions; its right to reject downstream technologies even if they are approved by the Commission; its change management provisions which effectively put manufacturer licensees at the mercy of the 4C in marked contrast to content participants, and other specific provisions, the CPRM license is unreasonable, discriminatory and anticompetitive. If CPRM is to be approved by the Commission, Philips respectfully submits that such approval be conditioned on elimination of these provisions and

substitution of terms and conditions compliant with the reasonable and nondiscriminatory licensing obligation found in the Broadcast Flag regulations.

Respectfully submitted,

PHILIPS ELECTRONICS NORTH AMERICA CORPORATION

Thomas B. Patton
Vice President, Government Relations
Philips Electronics North America Corp.
1300 Eye Street, N.W.
Suite 1070 East
Washington, D.C. 20005
(202) 962-8550

Rick Dorl
Vice President and General Counsel
Philips Consumer Electronics North America, a division of Philips Electronics North America Corporation
64 Perimeter Center, East
Atlanta, GA 30346
(770) 821-2232

April 6, 2004

APPENDIX A

Koninklijke Philips Electronics N.V.

P.O. Box 218 - 5600 MD Eindhoven - The Netherlands

By registered post and fax

Mr. J. Lawrence
Intel Corporation
JF3-147
2111 N.E. 25th Avenue
Hillsboro, OR 97124
USA

Mr. H. Hosokawa
Matsushita Electric Industrial Co. Ltd.
1006 Kadoma, Kadoma City
Osaka 571-8501
JAPAN

Mr. D. Leake
IBM Corporation
Yorktown Heights, N.Y.
Somers, NY 1058989
USA

Mr. M. Ayers
Toshiba America Information Systems Inc.
9740 Irvine Boulevard
Irvine, CA 92618-1697
USA

20 October 2003

Dear Sirs,

Re: **CPRM/CPPM licensing arrangements**

We refer to the discussions held between representatives of Philips and representatives of the 4C entity in connection with the CPRM/CPPM licence arrangements.

As you know, one of the principal objections of Philips against the current CPRM/CPPM licensing arrangements concerns the mechanism whereby adopters of the licensed technology are obliged not to assert their patents in respect of the licensed technologies against any of the 4C member companies, nor against any fellow adopter of the CPRM/CPPM technologies. By contrast, the 4C member companies themselves do require consideration for the use of the licensed technologies (currently at the rate of US$ 0.02 per disc, and US$ 0.10 per device).

Despite multiple requests, Philips has never been provided with any insight in the patents (if any) that the 4C companies claim are underlying the licensed technologies.

PHILIPS

This letter serves as notification that Philips maintains its opposition to the non-assert provisions currently contained in the CPRM/CPPM licence arrangements, which we regard as unbalanced and unfair, against the background of the fact that the 4C member companies, licensors of the CPRM/CPPM technologies, do require financial compensation, for undisclosed intellectual property.

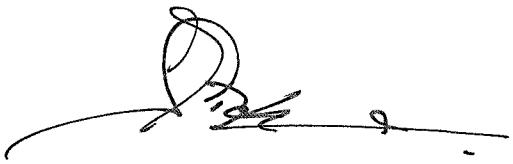
Second, this letter serves as notification that Philips does possess at least one patent which we believe is necessarily infringed by the CPRM/CPPM technologies, licensed by 4C, to wit US patent no. 5,991,400. Attached to this letter is a claim chart showing which patent claims under US patent no. 5,991,400 relate to which parts of the CPRM specification.

Philips is considering the conditions under which it will make this patent (as well as other relevant patents) available to users of the CPRM/CPPM technologies. We will shortly issue a notification to interested parties to that effect.

All Philips' rights in relation to the above are formally reserved.

Yours sincerely,

Koninklijke Philips Electronics N.V.



H. Sakkers
General Counsel
Philips Intellectual Property & Standards

CLAIM CHART

US patent no. 5,991,400 in relation to 4C CPRM standard

Based on Chapter 5 of the CPRM Specification: DVD Book, Revision 0.95

1. A conditional access system, comprising:	CPRM is used to protect content stored on CPRM compliant media against unauthorized access (page 5-1, under "Introduction")
descrambler means for converting scrambled information into descrambled information depending on control words;	The process to decrypt encrypted Video Recording formatted content is described in section 5.2.2 (pages 5-5 and 5-6). Step 5 "Decrypt AV packs" is the step of converting encrypted AV packs to decrypted packs. The Content Key (K_C) is used to decrypt the packs.
security means for supplying the control words to the descrambler means so that the descrambler means perform the conversion;	The Content Key K_C is derived from information on the disc and subsequently used to decrypt the AV packs (step 5 of section 5.2.2).
means for supplying control word generation data, different from the control words, for recording on a storage media along with the scrambled information;	Encrypted AV packs are recorded on a disk together with a so-called Encrypted Title Key (step 4 of section 5.2.1)
and generation means for providing the control words depending on the recorded control word generation data when the scrambled information along with the generation data is read from the storage media.	The Content Key (K_c) is provided depending on the Encrypted Title Key by first calculating the Title Key (step 3 of section 5.2.2), then calculating an intermedia key K_i (step 4) and finally using K_i and the D_{TKE} to calculate the Content Key (step 5).
5. The system of claim 1 in which the security means are for receiving recording-entitlement information and controlling the generation means to supply code word generation data depending on receiving the recording-entitlement information.	Incoming content with copy control information indicating that one generation of copies may be made is recorded with CPRM protection (page 5-2, 2nd to last paragraph).
7. A security device, comprising:	The Player Device works as follows:
means for providing control words to a descrambler for converting scrambled information into descrambled information depending on the control words; and	The Content Key K_C (used in a descrambler) is used to decrypt the AV packs (step 5 of section 5.2.2).
means for supplying control word generation data, that is different than the control words, for recording along with the scrambled information on storage media;	Encrypted AV packs are recorded on a disk together with a so-called Encrypted Title Key (step 4 of section 5.2.1).
and in which the means for providing control words are for providing the control words depending on the control word generation	The Content Key (K_c) is provided depending on the Encrypted Title Key which is read from the storage medium:

data read from the storage media.	"The Playback Device reads the Encrypted Title Key from the disc" (step 3 of section 5.2.2).
8. A recording medium, comprising:	Figure 5-1 shows a recording medium (CPRM Compliant DVD Media)
scrambled information; and	Encrypted AV packs are stored on the recording medium in Figure 5-1. Step 6 of section 5.2.1 explains that the AV packs are encrypted using a Content Key K_C.
control word generation means for providing control words to descramble the scrambled information and which are different from the control words.	The Encrypted Title Key is calculated and recorded on the recording medium. See Figure 5-1 and step 4 of section 5.2.1. The Encrypted Title Key is different from the Content Key. During decryption, the Content Key is provided depending on the Encrypted Title Key by first calculating the Title Key (step 3 of section 5.2.2), then calculating an intermedia key K_I (step 4) and finally using K_I and the D_{TKE} to calculate the Content Key (step 5).
9. A method of time-shifted conditional access to scrambled information, comprising:	CPRM is used to allow copy-once recording of content in encrypted form, allowing time-shifted conditional access to this content by playing back the content at a later time.
providing scrambled information;	Video Recording formatted content is provided in encrypted form as AV packs (Figure 5-1, bottom left).
providing control word generation data;	The Encrypted Title Key is provided as an output of steps 1-4 of section 5.2.1.
recording the scrambled information along with the control word generation data onto storage media;	The encrypted content and the Encrypted Title Key are recorded on CPRM compliant DVD media (Figure 5-1, steps 4 and 5 of section 5.2.1).
reading the scrambled information along with the control word generation data from the storage media;	The encrypted content and the Encrypted Title Key are read from CPRM compliant DVD media (Figure 5-1, steps 3 and 5 of section 5.2.2).
supplying the recorded scrambled information to a descrambler;	The encrypted AV packs are descrambled in step 5 of section 5.2.2.
generating control words depending on the control word generation data;	A 56-bit Content Key is generated depending on the Encrypted Title Key by first calculating the Title Key (step 3 of section 5.2.2), then calculating an intermedia key K_I (step 4) and finally using K_I and the D_{TKE} to calculate the Content Key (step 5).
supplying the control words to the descrambler; and	The resulting Content Key value is then used to decrypt the AV packs (step 5 of

	section 5.2.2.).
unscrambling the scrambled information depending on the control words.	The resulting Content Key value is then used to decrypt the AV packs (step 5 of section 5.2.2.).
10. The method of claim 9 in which: the method further comprises providing recording entitlement information; and producing control word generating data depends on receiving the recording entitlement information.	Incoming content with copy control information indicating that one generation of copies may be made is recorded with CPRM protection (page 5-2, 2nd to last paragraph).
15. A conditional access system, comprising:	CPRM is used to protect content stored on CPRM compliant media against unauthorized access (page 5-1, under "Introduction")
de-scrambler means for converting scrambled information into de-scrambled information depending on key words;	The process to decrypt encrypted Video Recording formatted content is described in section 5.2.2 (pages 5-5 and 5-6). Step 5 "Decrypt AV packs" is the step of converting encrypted AV packs to decrypted packs. The Content Key (K_C) is used to decrypt the packs.
security means for providing the key words to the de-scrambler means depending on generation data that is independent of the scrambled information; and	During decryption, the Content Key is provided depending on the Encrypted Title Key by first calculating the Title Key (step 3 of section 5.2.2), then calculating an intermedia key K_i (step 4) and finally using K_i and the D_{TKE} to calculate the Content Key (step 5). The Encrypted Title Key is independent from the encrypted content.
means for reading or recording the scrambled information and the generation data together on storage media.	The encrypted AV packs and the Encrypted Title Key are both recorded on the disc (see Figure 5-1 and step 4 of section 5.2.1).

CERTIFICATE OF SERVICE

The undersigned hereby certifies that true and correct copies of the foregoing were served on the following individuals on April 6, 2004, by first-class mail, postage pre-paid:

Bruce H. Turnbull
Chair, Policy Group
Weil, Gotshal & Manges LLP
1501 K Street, N.W.
Suite 100
Washington, D.C. 20005

Thomas B. Patton